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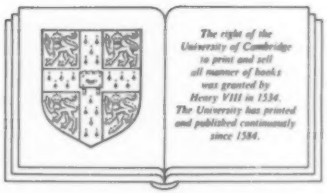

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Experimental study of the Faraday instability, **221**, 1990, 383–409
Douglass, R. W. *See* Gardner, Douglass & Trogdon
Dragon, C. A. & Grotberg, J. B.
Oscillatory flow and mass transport in a flexible tube, **231**, 1991, 135–155
Drake, T. G.
Granular flow: physical experiments and their implications for microstructural theories, **225**, 1991, 121–152
Dresselhaus, E. & Tabor, M.
The kinematics of stretching and alignment of material elements in general flow fields, **236**, 1992, 415–444
Dritschel, D. G.
Generalized helical Beltrami flows in hydrodynamics and magnetohydrodynamics, **222**, 1991, 525–541
See also Waugh & Dritschel
Dritschel, D. G., Haynes, P. H., Juckes, M. N. & Shepherd, T. G.
The stability of a two-dimensional vorticity filament under uniform strain, **230**, 1991, 647–665
Dritschel, D. G. & Polvani, L. M.
The roll-up of vorticity strips on the surface of a sphere, **234**, 1991, 47–69
Drummond, I. T. & Münch, W.
Distortion of line and surface elements in model turbulent flows, **225**, 1991, 529–543
Dubovikov, M. M. *See* Tatarskii, Dubovikov, Praskovsky & Karyakin
Dubrulle, B. & Zahn, J.-P.
Nonlinear instability of viscous plane Couette flow. Part 1. Analytical approach to a necessary condition, **231**, 1991, 561–573
Duck, P. W.
The unsteady laminar boundary layer on an axisymmetric body subject to small-amplitude fluctuations in the free-stream velocity, **232**, 1991, 415–438
Duijvestijn, P. E. M. *See* Miesen, Beijnon, Duijvestijn, Oliemans & Verheggen
Duin, C. A. van & Janssen, P. A. E. M.
An analytic model of the generation of surface gravity waves by turbulent air flow, **236**, 1992, 197–215
Duncan, J. H. & Zhang, S.
On the interaction of a collapsing cavity and a compliant wall, **226**, 1991, 401–423
Durbin, P. A. & Belcher, S. E.
Scaling of adverse-pressure-gradient turbulent boundary layers, **238**, 1992, 699–722
Dussan V., E. B. *See* Weinstein, Dussan V. & Ungar
Dussan V., E. B., Ramé, E. & Garoff, S.
On identifying the appropriate boundary conditions at a moving contact line: an experimental investigation, **230**, 1991, 97–116
Dyment, A. *See* Merlen & Dyment

Eatock Taylor, R. *See* Chau & Eatock Taylor
Eaton, J. K. *See* Longmire & Eaton; Squires & Eaton
Eckelmann, H. *See* Noack, Ohle & Eckelmann
Eckmann, D. M. & Grotberg, J. B.
Experiments on transition to turbulence in oscillatory pipe flow, **222**, 1991, 329–350
Ehrenstein, U. & Koch, W.
Three-dimensional wavelike equilibrium states in plane Poiseuille flow, **228**, 1991, 111–148
Ehrhard, P. & Davis, S. H.
Non-isothermal spreading of liquid drops on horizontal plates, **229**, 1991, 365–388
Eltayeb, I. A. & Loper, D. E.
On the stability of vertical double-diffusive interfaces. Part 1. A single plane interface, **228**, 1991, 149–181
Erlebacher, G. *See* Sarkar, Erlebacher, Hussaini & Kreiss
Erlebacher, G., Hussaini, M. Y., Speziale, C. G. & Zang, T. A.
Toward the large-eddy simulation of compressible turbulent flows, **238**, 1992, 155–185
Erm, L. P. & Joubert, P. N.
Low-Reynolds-number turbulent boundary layers, **230**, 1991, 1–44
Erwin, D. A. *See* Pham-Van-Diep, Erwin & Muntz
Etemadi, N.
On curve and surface stretching in isotropic turbulent flow, **221**, 1990, 685–692
Evans, D. V.
Diffraction of waves by obstacles and inhomogeneities in fluids: a report on Euromech Colloquium 271, **225**, 1991, 687–690
See also Callan, Linton & Evans
Evans, D. V. & Linton, C. M.
Trapped modes in open channels, **225**, 1991, 153–175
Evans, D. V. & McIver, P.
Trapped waves over symmetric thin bodies, **223**, 1991, 509–519

Faetti, S. *See* Cocciaro, Faetti & Nobili

Faller, A. J.
Instability and transition of disturbed flow over a rotating disk, **230**, 1991, 245–269
Fanneløp, T. K., Hirschberg, S. & Küffer, J.
Surface current and recirculating cells generated by bubble curtains and jets, **229**, 1991, 629–657
Fasel, H. & Konzelmann, U.
Non-parallel stability of a flat-plate boundary layer using the complete Navier–Stokes equations, **221**, 1990, 311–347
Fautrelle, Y. *See* Galpin & Fautrelle; Galpin, Fautrelle & Sneyd
Felderhof, B. U.
Virtual mass and drag in two-phase flow, **225**, 1991, 177–196
Feldstein, F. I. *See* Ruvinsky, Feldstein & Freidman
Feng, J. Q. & Beard, K. V.
Resonances of a conducting drop in an alternating electic field, **222**, 1991, 417–435
Three-dimensional oscillation characteristics of electrostatically deformed drops, **227**, 1991, 429–447
Fennel, W. & Schmidt, M.
Responses to topographical forcing, **223**, 1991, 209–240
Fermigier, M., Limat, L., Wesfreid, J. E., Boudinet, P. & Quilliet, C.
Two-dimensional patterns in Rayleigh–Taylor instability of a thin layer, **236**, 1992, 349–383
Fernando, H. J. S. *See* De Silva & Fernando; Lin, Lindberg, Boyer & Fernando; Noh & Fernando
Fernando, H. J. S., Chen, R.-R. & Boyer, D. L.
Effects of rotation on convective turbulence, **228**, 1991, 513–547
Ferziger, J. H. *See* Holt, Koseff & Ferziger; Yang, Spalart & Ferziger
Feuillebois, F. *See* Bruneau, Anthore, Feuillebois, Auvray & Petipas
Ffowcs Williams, J. E. *See* Guo & Ffowcs Williams
Ffowcs Williams, J. E. & Guo, Y. P.
On resonant nonlinear bubble oscillations, **224**, 1991, 507–529
Filippov, I. A. *See* Voropayev, Afanasyev & Filippov
Filler, J. R., Marston, P. L. & Mih, W. C.
Response of the shear layers separating from a circular cylinder to small-amplitude rotational oscillations, **231**, 1991, 481–499
Fink, J. H. & Griffiths, R. W.
Radial spreading of viscous–gravity currents with solidifying crust, **221**, 1990, 485–509
Finlay, W. H.
Transition to turbulence in a rotating channel, **237**, 1992, 73–99
See also Guo & Finlay
Finn, R. *See* Concus & Finn
Fitt, A. D. *See* O'Malley, Fitt, Jones, Ockendon & Wilmott
Fleury, M., Mory, M., Hopfinger, E. J. & Auchere, D.
Effects of rotation on turbulent mixing across a density interface, **223**, 1991, 165–191
Flierl, G. R. *See* Swaters & Flierl
Fontaine, A. A., Petrie, H. L. & Brungart, T. A.
Velocity profile statistics in a turbulent boundary layer with slot-injected polymer, **238**, 1992, 435–466
Fornberg, B.
Steady incompressible flow past a row of cylinders, **225**, 1991, 655–671
Forth, S. A. & Wheeler, A. A.
Coupled convective and morphological instability in a simple model of the solidification of a binary alloy, including a shear flow, **236**, 1992, 61–94
Foss, J. K. *See* Ho, Zohar, Foss & Buell
Fowlis, W. W. *See* Roberts, Kornfeld & Fowlis
Frankel, I. & Brenner, H.
Generalized Taylor dispersion phenomena in unbounded homogeneous shear flows, **230**, 1991, 147–181
Fredsoe, J. *See* Sumer, Jensen & Fredsoe
Freidman, G. I. *See* Ruvinsky, Feldstein & Freidman
Frisch, U. *See* Aurell, Frisch, Lutsko & Vergassola
Fujimura, K. *See* Mizushima & Fujimura
Fukumoto, Y. & Miyazaki, T.
Three-dimensional distortions of a vortex filament with axial velocity, **222**, 1991, 369–416
Fung, J. C. H., Hunt, J. C. R., Malik, N. A. & Perkins, R. J.
Kinematic simulation of homogeneous turbulence by unsteady random Fourier modes, **236**, 1992, 281–318

Galpin, J. M. & Fautrelle, Y.
Liquid-metal flows induced by low-frequency alternating magnetic fields, **239**, 1992, 383–408
Galpin, J. M., Fautrelle, Y. & Sneyd, A. D.
Parametric resonance in low-frequency magnetic stirring, **239**, 1992, 409–427
Gañán-Calvo, A. M.
Oscillations of liquid captive rotating drops, **226**, 1991, 63–89

Gardner, D. R., Douglass, R. W. & Trogdon, S. A.
Linear stability of natural convection in spherical annuli, **221**, 1990, 105–129
Garoff, S. *See* Dussan V., Ramé & Garoff
Gatski, T. B. *See* Speziale, Sarkar & Gatski
Gaver, D. P. & Grotberg, J. B.
Droplet spreading on a thin viscous film, **235**, 1991, 399–414
Gebhart, B. *See* Brewster & Gebhart
George, W. K. & Hussein, H. J.
Locally axisymmetric turbulence, **233**, 1991, 1–23
Georgiou, E., Papangeorgiou, D. T., Maldarelli, C. & Rumschitzki, D. S.
The double layer–capillary stability of an annular electrolyte film surrounding a dielectric-fluid core in a tube, **226**, 1991, 149–174
Germano, M.
Turbulence: the filtering approach, **238**, 1992, 325–336
Gerrard, J. H. *See* Green & Gerrard
Gharib, M. *See* Hammache & Gharib
Ghassemi, M. *See* Corke, Krull & Ghassemi
Ghosh, S., Chang, H.-C. & Sen, M.
Heat-transfer enhancement due to slender recirculation and chaotic transport between counter-rotating eccentric cylinders, **238**, 1992, 119–154
Gilham, S., Ivey, P. C., Owen, J. M. & Pincombe, J. R.
Self-induced flow in a rotating tube, **230**, 1991, 505–524
Giorgini, A. *See* Alfonsi & Giorgini
Girimaji, S. S. & Pope, S. B.
Propagating surfaces in isotropic turbulence, **234**, 1991, 247–277
Glatzmaier, G. A. *See* Bercovici, Schubert & Glatzmaier
Gledzer, E. B. & Ponomarev, V. M.
Instability of bounded flows with elliptical streamlines, **240**, 1992, 1–30
Glezer, A. *See* Nygaard & Glezer
Gnevyshev, V. G. & Shrira, V. I.
On the evaluation of barotropic–baroclinic instability parameters of zonal flows on a beta-plane, **221**, 1990, 161–181
Gogos, G. *See* Zhang & Gogos
Goldshtik, M., Hussain, F. & Shtern, V.
Symmetry breaking in vortex-source and Jeffery–Hamel flows, **232**, 1991, 521–566
Goldstein, M. E., Leib, S. J. & Cowley, S. J.
Distortion of a flat-plate boundary layer by free-stream vorticity normal to the plate, **237**, 1992, 231–260
Gottlieb, D. *See* Abarbanel, Don, Gottlieb, Rudy & Townsend
Goussis, D. A. & Kelly, R. E.
Surface wave and thermocapillary instabilities in a liquid film flow, **223**, 1991, 25–45 (and Corrigendum, **226**, 1991, 663)
Göz, M. F.
On the origin of wave patterns in fluidized beds, **240**, 1992, 379–404
Grace, J. R. *See* Homsy, Jackson & Grace
Graebel, W. P. *See* Zhou & Graebel
Graham, A. L. *See* Phan-Thien, Tran-Cong & Graham
Graham, M. D. & Steen, P. H.
Structure and mechanism of oscillatory convection in a cube of fluid-saturated porous material heated from below, **232**, 1991, 591–609
Grappin, R. & Léorat, J.
Lyapunov exponents and the dimension of periodic incompressible Navier–Stokes flows: numerical measurements, **222**, 1991, 61–94
Green, R. B. & Gerrard, J. H.
An optical interferometric study of the wake of a bluff body, **226**, 1991, 219–242
Green, S. I. & Acosta, A. J.
Unsteady flow in trailing vortices, **227**, 1991, 107–134
Greenspan, H. P. *See* Dahlkild, Amberg & Greenspan
Griffiths, R. W. *See* Fink & Griffiths
Grimshaw, R. & Zengxin, Y.
Resonant generation of finite-amplitude waves by the flow of a uniformly stratified fluid over topography, **229**, 1991, 603–628
Grosch, C. E. *See* Jackson & Grosch
Grosch, C. E. & Jackson, T. L.
Inviscid spatial stability of a three-dimensional compressible mixing layer, **231**, 1991, 35–50
Grotberg, J. B. *See* Dragon & Grotberg; Eckmann & Grotberg; Gaver & Grotberg; Halpern & Grotberg; Jensen & Grotberg
Grue, J. *See* Nossen, Grue & Palm
Guazzelli, E. *See* Rey, Belzons & Guazzelli
Guermond, J.-L.
Corrigendum to 'A generalized lifting-line theory for curved and swept wings, vol. 211 (1990), pp. 497–513', **229**, 1991, 695
Guermond, J.-L. & Sellier, A.
A unified unsteady lifting-line theory, **229**, 1991, 427–451
Guha, A. *See* Young & Guha
Guo, Y. & Finlay, W. H.
Splitting, merging and wavelength selection of vortices in curved and/or rotating channel flow due to Eckhaus instability, **228**, 1991, 661–691
Guo, Y. P. *See* Ffowcs Williams & Guo

Guo, Y. P. & Ffowcs Williams, J. E.
A theoretical study on drop impact sound and rain noise, **227**, 1991, 345–355
Gustavsson, L. H.
Energy growth of three-dimensional disturbances in plane Poiseuille flow, **224**, 1991, 241–260

Haines, E. M. *See* Strathdee, Robinson & Haines
Hajj, M. R., Miksad, R. W. & Powers, E. J.
Subharmonic growth by parametric resonance, **236**, 1992, 385–413
Haley, P. J. & Miksis, M. J.
The effect of the contact line on droplet spreading, **223**, 1991, 57–81
Hall, P. *See* Bassom & Hall; Bennett, Hall & Smith
Hall, P., Balakumar, P. & Papageorgiu, D.
On a class of unsteady three-dimensional Navier–Stokes solutions relevant to rotating disc flows: threshold amplitudes and finite-time singularities, **238**, 1992, 297–323
Hall, P. & Horseman, N. J.
The linear inviscid secondary instability of longitudinal vortex structures in boundary layers, **232**, 1991, 357–375
Hall, P. & Smith, F. T.
On strongly nonlinear vortex/wave interactions in boundary-layer transition, **227**, 1991, 641–666
Halpern, D. & Grotberg, J. B.
Dynamics and transport of a localized soluble surfactant on a thin film, **237**, 1992, 1–11
Halpern, D. & Secomb, T. W.
Viscous motion of disk-shaped particles through parallel-sided channels with near-minimal widths, **231**, 1991, 545–560
Hammache, M. & Gharib, M.
An experimental study of the parallel and oblique vortex shedding from circular cylinders, **232**, 1991, 567–590
Hammack, J. *See* Perlin & Hammack
Hanratty, T. J. *See* Mei, Adrian & Hanratty; Young & Hanratty
Hara, T. & Mei, C. C.
Frequency downshift in narrowbanded surface waves under the influence of wind, **230**, 1991, 429–477
Haritonidis, J. H. *See* Cohen, Breuer & Haritonidis
Harper, J. F.
The leading edge of an oil slick, soap film, or bubble stagnant cap in Stokes flow, **237**, 1992, 23–32
See also Lerner & Harper
Hart, J. E. *See* Pratte & Hart
Hasan, M. A. Z.
The flow over a backward-facing step under controlled perturbation: laminar separation, **238**, 1992, 73–96
Hasselmann, D. & Bösenberg, J.
Field measurements of wave-induced pressure over wind-sea and swell, **230**, 1991, 391–428
Hatta, N. *See* Ishii, Hatta, Umeda & Yuhi
Hayashi, Y.-Y. *See* Takehiro & Hayashi
Haynes, P. H. *See* Dritschel, Haynes, Juckes & Shepherd
He, Z., Dagan, Z. & Maldarelli, C.
The influence of surfactant adsorption on the motion of a fluid sphere in a tube. Part 1. Uniform retardation controlled by sorption kinetics, **222**, 1991, 1–32
Hegna, C. C. & Bhattacharjee, A.
Islands in three-dimensional steady flows, **227**, 1991, 527–542
Heijst, G. J. F. van *See* Carnevale, Kloosterziel & Heijst; Kloosterziel & Heijst
Heijst, G. J. F. van, Kloosterziel, R. C. & Williams, C. W. M.
Laboratory experiments on the tripolar vortex in a rotating fluid, **225**, 1991, 301–331
Hellou, M. & Coutanceau, M.
Cellular Stokes flow induced by rotation of a cylinder in a closed channel, **236**, 1992, 557–577
Henderson, D. M. & Miles, J. W.
Faraday waves in 2:1 internal resonance, **222**, 1991, 449–470
Henderson, G. A. & Aldridge, K. D.
A finite-element method for inertial waves in a frustum, **234**, 1991, 317–327
Henderson, L. F., Colella, P. & Puckett, E. G.
On the refraction of shock waves at a slow–fast gas interface, **224**, 1991, 1–27
Henningson, D. S. & Kim, J.
On turbulent spots in plane Poiseuille flow, **228**, 1991, 183–205
Herring, J. R. & Métais, O.
Spectral transfer and bispectra for turbulence with passive scalars, **235**, 1991, 103–121
Hewitt, G. F. & Jayanti, S.
Prediction of film inversion in two-phase flow in coiled tubes, **236**, 1992, 497–511
Higuchi, H. *See* Arndt, Arakeri & Higuchi
Hill, N. A. *See* Davis & Hill
Hiller, W. J. *See* Becker, Hiller & Kowalewski
Hinch, E. J. *See* Acrivos, Batchelor, Hinch, Koch & Mauri
Hirschberg, S. *See* Fanneløp, Hirschberg & Küffer
Ho, C.-M., Zohar, Y., Foss, J. K. & Buell, J. C.
Phase decorrelation of coherent structures

in a free shear layer, **230**, 1991, 319–337

Ho, L. W. *See* Johnson, Kamm, Ho, Shapiro & Pedley

Hocking, L. M.
Rival contact-angle models and the spreading of drops, **239**, 1992, 671–681

Hocking, L. M. & Mahdmina, D.
Capillary–gravity waves produced by a wavemaker, **224**, 1991, 217–226

Hogan, S. J.
The exact solution to Phillips' equation for the degree of saturation of short waves in the presence of ocean currents, **223**, 1991, 357–362

Holloway, A. G. L. & Tavoularis, S.
The effects of curvature on sheared turbulence, **237**, 1992, 569–603

Holloway, G. *See* Bartello & Holloway

Holm, D. D.
Elliptical vortices and integrable Hamiltonian dynamics of the rotating shallow-water equations, **227**, 1991, 393–406 (with Appendix by D. David & T. K. Ohsumi)

Holmes, P. *See* Berkooz, Holmes & Lumley

Holt, S. E., Koseff, J. R. & Ferziger, J. H.
A numerical study of the evolution and structure of homogeneous stably stratified sheared turbulence, **237**, 1992, 499–539

Homsy, G. M., Jackson, R. & Grace, J. R.
Report of a Symposium on Mechanics of Fluidized Beds, **236**, 1992, 477–495

Hopfinger, E. J. *See* Fleury, Mory, Hopfinger & Auchere; Richards, Smeed, Hopfinger & Chabert d'Hières

Hopper, R. W.
Plane Stokes flow driven by capillarity on a free surface. Part 2. Further developments, **230**, 1991, 355–364

Horev, E. *See* Wygnanski, Katz & Horev

Horiuti, K.
Assessment of two-equation models of turbulent passive-scalar diffusion in channel flow, **238**, 1992, 405–433

Horlock, J. H. *See* Lakshminarayana & Horlock

Horng, K. D. *See* Keh, Horng & Kuo

Horseman, N. J. *See* Hall & Horseman

Houwing, A. F. P. *See* McIntyre, Houwing, Sandeman & Bachor

Howard, L. N. & Veronis, G.
Stability of salt fingers with negligible diffusivity, **239**, 1992, 511–522

Howe, M. S.
A note on the Kraichnan–Phillips theorem, **234**, 1991, 443–448

Howison, S. D., Ockendon, J. R. & Wilson, S. K.
Incompressible water-entry problems at small deadrise angles, **222**, 1991, 215–230

Hu, F. Q. *See* Tam & Hu

Hua, T. Q. *See* Moon, Hua & Walker

Hudspeth, R. T. & Sulisz, W.
Stokes drift in two-dimensional wave flumes, **230**, 1991, 209–229

Hultgren, L. S.
Nonlinear spatial equilibration of an externally excited instability wave in a free shear layer, **236**, 1992, 635–664

Hunt, J. C. R. *See* Fung, Hunt, Malik & Perkins; Komori, Hunt, Kanzaki & Murakami

Hunt, J. C. R. & Hussain, F.
A note on velocity, vorticity and helicity of inviscid fluid elements, **229**, 1991, 569–587

Hunt, J. C. R., Tampieri, F., Weng, W. S. & Carruthers, D. J.
Air flow and turbulence over complex terrain: a colloquium and a computational workshop, **227**, 1991, 667–688

Huppert, H. E., Kerr, R. C., Lister, J. R. & Turner, J. S.
Convection and particle entrainment driven by differential sedimentation, **226**, 1991, 349–369

Hurlburt, N. E. *See* Matthews, Hurlburt, Proctor & Brownjohn

Husain, H. S. & Hussain, F.
Elliptic jets. Part 2. Dynamics of coherent structures: pairing, **233**, 1991, 439–482

Hussain, F. *See* Bridges & Hussain; Goldshtik, Hussain & Shtern; Hunt & Hussain; Husain & Hussain; Kida, Takaoka & Hussain

Hussaini, M. Y. *See* Erlebacher, Hussaini, Speziale & Zang; Sarkar, Erlebacher, Hussaini & Kreiss

Hussein, H. J. *See* George & Hussein

Hyun, J. M. & Park, J. S.
Spin-up from rest of a compressible fluid in a rapidly rotating cylinder, **237**, 1992, 413–434

Ibrahim, E. A. *See* Lin & Ibrahim

Imberger, J. *See* Jeevaraj & Imberger; McDonald & Imberger

Inoue, O.
Double-frequency forcing on spatially growing mixing layers, **234**, 1991, 553–581

Ishii, R., Hatta, N., Umeda, Y. & Yuhi, M.
Supersonic gas–particle two-phase flow around a sphere, **221**, 1990, 453–483

Iskandarani, M. & Liu, P. L.-F.
Mass transport in three-dimensional water waves, **231**, 1991, 417–437
Mass transport in two-dimensional water waves, **231**, 1991, 395–415

Ivey, P. C. *See* Gilham, Ivey, Owen & Pincombe

Jackson, R. *See* Auzerais, Jackson, Russel & Murphy; Homsy, Jackson & Grace
Jackson, T. L. *See* Grosch & Jackson
Jackson, T. L. & Grosch, C. E.
Inviscid spatial stability of a compressible mixing layer. Part 3. Effect of thermodynamics, **224**, 1991, 159–175
Jacobs, J. W.
Shock-induced mixing of a light-gas cylinder, **234**, 1991, 629–649
Jacqmin, D.
Frontogenesis driven by horizontally quadratic distributions of density, **228**, 1991, 1–24
Jaluria, Y. *See* Papanicolaou & Jaluria
Janssen, J. D. *See* Rindt, Steenhoven, Janssen & Vossers
Janssen, P. A. E. M. *See* Duin & Janssen
Jayanti, S. *See* Hewitt & Jayanti
Jayaraman, R. *See* Brereton, Reynolds & Jayaraman
Jeevaraj, C. G. & Imberger, J.
Experimental study of double-diffusive instability in sidewall heating, **222**, 1991, 565–586
Jenkins, J. T. *See* Louge, Mastorakos & Jenkins
Jenkins, J. T. & Askari, E.
Boundary conditions for rapid granular flows: phase interfaces, **223**, 1991, 497–508
Jensen, B. L. *See* Sumer, Jensen & Fredsoe
Jensen, O. E. & Grotberg, J. B.
Insoluble surfactant spreading on a thin viscous film: shock evolution and film rupture, **240**, 1992, 259–288
Jiang, F.
Asymptotic evaluation of three-dimensional wave packets in parallel flows, **226**, 1991, 573–590
Jiang, Y. J., Umemura, A. & Law, C. K.
An experimental investigation on the collision behaviour of hydrocarbon droplets, **234**, 1991, 171–190
Jimenez, J. & Moin, P.
The minimal flow unit in near-wall turbulence, **225**, 1991, 213–240
Johansson, A. V. *See* Lundbladh & Johansson
Johansson, A. V., Alfredsson, P. H. & Kim, J.
Evolution and dynamics of shear-layer structures in near-wall turbulence, **224**, 1991, 579–599
Johnson, D. W. *See* Read, Bell, Johnson & Small
Johnson, E. R. *See* Page & Johnson; Stocker & Johnson
Johnson, M., Kamm, R. D., Ho, L. W., Shapiro, A. & Pedley, T. J.
The nonlinear growth of surface-tension-driven instabilities of a thin annular film, **233**, 1991, 141–156
Jones, T. V. *See* O'Malley, Fitt, Jones, Ockendon & Wilmott
Joo, S. W., Davis, S. H. & Bankoff, S. G.
Long-wave instabilities of heated falling films: two-dimensional theory of uniform layers, **230**, 1991, 117–146
Joo, S. W., Messiter, A. F. & Schultz, W. W.
Evolution of weakly nonlinear water waves in the presence of viscosity and surfactant, **229**, 1991, 135–158
Joseph, D. D. *See* Bai, Chen & Joseph; Chen & Joseph
Joseph, D. D., Nelson, J., Renardy, M. & Renardy, Y.
Two-dimensional cusped interfaces, **223**, 1991, 383–409
Joubert, P. N. *See* Baskaran, Smits & Joubert; Erm & Joubert; Saddoughi & Joubert
Joulin, G. *See* Buckmaster & Joulin
Juckes, M. N. *See* Dritschel, Haynes, Juckes & Shepherd
Jurman, L. A., Deutsch, S. E. & McCready, M. J.
Interfacial mode interactions in horizontal gas–liquid flows, **238**, 1992, 187–219
Justesen, P.
A numerical study of oscillating flow around a circular cylinder, **222**, 1991, 157–196

Kaiktsis, L., Karniadakis, G. E. & Orszag, S. A.
Onset of three-dimensionality, equilibria, and early transition in flow over a backward-facing step, **231**, 1991, 501–528
Kalliadasis, S. *See* Bontozoglou, Kalliadasis & Karabelas
Kallio, G. A. & Stock, D. E.
Interaction of electrostatic and fluid dynamic fields in wire–plate electrostatic precipitators, **240**, 1992, 133–166
Kamm, R. D. *See* Akhavan, Kamm & Shapiro; Johnson, Kamm, Ho, Shapiro & Pedley; Sharp, Kamm, Shapiro, Kimmel & Karniadakis
Kanzaki, T. *See* Komori, Hunt, Kanzaki & Murakami
Karabelas, A. J. *See* Bontozoglou, Kalliadasis & Karabelas
Karniadakis, G. E. *See* Kaiktsis, Karniadakis & Orszag; Sharp, Kamm, Shapiro, Kimmel & Karniadakis
Karniadakis, G. E. & Triantafyllou, G. S.
Three-dimensional dynamics and transition to turbulence in the wake of bluff objects, **238**, 1992, 1–30
Karyakin, M. Yu. *See* Tatarskii, Dubovikov, Praskovsky & Karyakin
Kassoy, D. R. *See* Wang & Kassoy
Kato, H. *See* Kubota, Kato & Yamaguchi
Katz, J. *See* Ran & Katz

Katz, Y. *See* Wygnanski, Katz & Horev
Katz, Y., Seifert, A. & Wygnanski, I.
On the evolution of the turbulent spot in a laminar boundary layer with a favourable pressure gradient, **221**, 1990, 1–22
Kay, A.
Frontogenesis in gravity-driven flows with non-uniform density gradients, **235**, 1991, 529–556
Keh, H. J. *See* Chen & Keh
Keh, H. J., Horng, K. D. & Kuo, J.
Boundary effects on the electrophoresis of colloidal cylinders, **231**, 1991, 211–228
Keh, H. J. & Lien, L. C.
Electrophoresis of a colloidal sphere along the axis of a circular orifice or a circular disk, **224**, 1991, 305–333
Kelly, R. E. *See* Chen, Labhadi, Chang & Kelly; Goussis & Kelly
Kerman, B. R. *See* Longuet-Higgins, Kerman & Lunde
Kerpel, J., Tanny, J. & Tsinober, A.
On a stable solute gradient heated from below with prescribed temperature, **223**, 1991, 83–91
Kerr, O. S.
Double-diffusive instabilities at a sloping boundary, **225**, 1991, 333–354
Kerr, R. C. *See* Huppert, Kerr, Lister & Turner
Kerstein, A. R.
Linear-eddy modelling of turbulent transport. Part 6. Microstructure of diffusive scalar mixing fields, **231**, 1991, 361–394
Linear-eddy modelling of turbulent transport. Part 7. Finite-rate chemistry and multi-stream mixing, **240**, 1992, 289–313
Khomenko, G. A., Moiseev, S. S. & Tur, A. V.
The hydrodynamical alpha-effect in a compressible medium, **225**, 1991, 355–369
Khorrami, A. F. *See* Smith & Khorrami
Khorrami, M. R.
On the viscous modes of instability of a trailing line vortex, **225**, 1991, 197–212
Kida, S., Takaoka, M. & Hussain, F.
Collision of two vortex rings, **230**, 1991, 583–646
Killworth, P. D.
On hydraulic control in a stratified fluid, **237**, 1992, 605–626
Kim, J. *See* Antonia, Kim & Browne; Antonia, Teitel, Kim & Browne; Henningson & Kim; Johansson, Alfredsson & Kim
Kimmel, E. *See* Sharp, Kamm, Shapiro, Kimmel & Karniadakis
Kirby, J. T. *See* Suh, Dalrymple & Kirby
Kitoh, O.
Experimental study of turbulent swirling flow in a straight pipe, **225**, 1991, 445–479
Klaassen, G. P. & Peltier, W. R.
The influence of stratification on secondary instability in free shear layers, **227**, 1991, 71–106
Klages, D. & Demmig, F.
Model computations of the influence of carbon impurities on the ionization relaxation in krypton shock waves, **232**, 1991, 455–467
Klapper, I.
A study of fast dynamo action in chaotic helical cells, **239**, 1992, 359–381
Klebanoff, P. S., Cleveland, W. G. & Tidstrom, K. D.
On the evolution of a turbulent boundary layer induced by a three-dimensional roughness element, **237**, 1992, 101–187
Klingmann, B. G. B.
On transition due to three-dimensional disturbances in plane Poiseiulle flow, **240**, 1992, 167–195
Kloosterziel, R. C. *See* Carnevale, Kloosterziel & Heijst; Heijst, Kloosterziel & Williams
Kloosterziel, R. C. & Heijst, G. J. F. van
An experimental study of unstable barotropic vortices in a rotating fluid, **223**, 1991, 1–24
The evolution of stable barotropic vortices in a rotating free-surface fluid, **239**, 1992, 607–629
Knight, D. W. *See* Shiono & Knight
Knobloch, E., Proctor, M. R. E. & Weiss, N. O.
Heteroclinic bifurcations in a simple model of double-diffusive convection, **239**, 1992, 273–292
Koch, D. L. *See* Acrivos, Batchelor, Hinch, Koch & Mauri; Stover, Koch & Cohen
Koch, D. L. & Shaqfeh, E. S. G.
Screening in sedimenting suspensions, **224**, 1991, 275–303
Koch, W. *See* Ehrenstein & Koch
Kolodner, P. *See* Winkler & Kolodner
Komori, S., Hunt, J. C. R., Kanzaki, T. & Murakami, Y.
The effects of turbulent mixing on the correlation between two species and on concentration fluctuations in non-premixed reacting flows, **228**, 1991, 629–659
Konzelmann, U. *See* Fasel & Konzelmann
Kornfeld, D. M. *See* Roberts, Kornfeld & Fowlis
Korpela, S. A. *See* Wang & Korpela
Koschmieder, E. L. & Switzer, D. W.
The wavenumbers of supercritical surface-tension-driven Bénard convection, **240**, 1992, 533–548
Koseff, J. R. *See* Holt, Koseff & Ferziger; Schladow, Thomas & Koseff

Kotsovinos, N. E. & Angelidis, P. B.
The momentum flux in turbulent submerged jets, **229**, 1991, 453–470
Kowalewski, T. A. *See* Becker, Hiller & Kowalewski
Kranenburg, C., Pietrzak, J. D. & Abraham, G.
Trapped internal waves over undular topography, **226**, 1991, 205–217
Kreiman, K. D. *See* Zilitinkevich, Kreiman & Terzhevik
Kreiss, H. O. *See* Sarkar, Erlebacher, Hussaini & Kreiss
Krettenauer, K. & Schumann, U.
Numerical simulation of turbulent convection over wavy terrain, **237**, 1992, 261–299
Krishnamoorthy, L. V. *See* Bilger, Saetran & Krishnamoorthy
Krishnamurthy, L. *See* Bush & Krishnamurthy
Krull, J. D. *See* Corke, Krull & Ghassemi
Krymov, V. A. *See* Dolzhanskii, Krymov & Manin
Kubota, A., Kato, H. & Yamaguchi, H.
A new modelling of cavitating flows: a numerical study of unsteady cavitation on a hydrofoil section, **240**, 1992, 59–96
Küffer, J. *See* Fanneløp, Hirschberg & Küffer
Kuo, J. *See* Keh, Horng & Kuo
Kurschat, Th., Chaves, H. & Meier, G. E. A.
Complete adiabatic evaporation of highly superheated liquid jets, **236**, 1992, 43–59
Kusch, H. A. & Ottino, J. M.
Experiments on mixing in continuous chaotic flows, **236**, 1992, 319–348

Labhadi, A. *See* Chen, Labhadi, Chang & Kelly
Ladeinde, F. & Torrance, K. E.
Convection in a rotating, horizontal cylinder with radial and normal gravity forces, **228**, 1991, 361–385
Laedke, E. W. & Spatschek, K. H.
On localized solutions in nonlinear Faraday resonance, **223**, 1991, 589–601
Lai, Y. G. & So, R. M. C.
On near-wall turbulent flow modelling, **221**, 1990, 641–673
Lakshminarayana, B. & Horlock, J. H.
Corrigendum to 'Generalized expressions for secondary vorticity using intrinsic coordinates, vol. 59 (1973), pp. 97–115', **226**, 1991, 661–663
Lamb, K. G. & Pierrehumbert, R. T.
Steady-state nonlinear internal gravity-wave critical layers satisfying an upper radiation condition, **238**, 1992, 371–404
Lance, M. & Bataille, J.
Turbulence in the liquid phase of a uniform bubbly air–water flow, **222**, 1991, 95–118
Landman, M. J.
Time-dependent helical waves in rotating pipe flow, **221**, 1990, 289–310
Larson, R. G. *See* Shaqfeh, Muller & Larson
Lasheras, J. C. *See* Lázaro & Lasheras
Law, C. K. *See* Jiang, Umemura & Law; Umemura & Law
Lawrence, C. J. *See* Mei, Lawrence & Adrian
Lázaro, B. J. & Lasheras, J. C.
Particle dispersion in the developing free shear layer. Part 1. Unforced flow, **235**, 1991, 143–178
Particle dispersion in the developing free shear layer. Part 2. Forced flow, **235**, 1991, 179–221
Leal, L. G. *See* Szeri, Milliken & Leal; Szeri, Wiggins & Leal
Lee, T. & Budwig, R.
The onset and development of circular-cylinder vortex wakes in uniformly accelerating flows, **232**, 1991, 611–627
Leib, S. J.
Nonlinear evolution of subsonic and supersonic disturbances on a compressible free shear layer, **224**, 1991, 551–578
See also Goldstein, Leib & Cowley
Leibovich, S. *See* Yang & Leibovich
Leibovich, S., Lele, S. K. & Moroz, I. M.
Corrigendum to 'Nonlinear dynamics in Langmuir circulations and in thermosolutal convection, vol. 198 (1989), pp. 471–511', **235**, 1992, 690
Lele, S. K. *See* Colonius, Lele & Moin; Leibovich, Lele & Moroz
Lelong, M.-P. & Riley, J. J.
Internal wave–vortical mode interactions in strongly stratified flows, **232**, 1991, 1–19
Léorat, J. *See* Grappin & Léorat
Lerner, L. & Harper, J. F.
Stokes flow past a pair of stagnant-cap bubbles, **232**, 1991, 167–190
Lesieur, M. *See* Métais & Lesieur
Levine, H. *See* Yang & Levine
Lezzi, A. M. & Prosperetti, A.
The stability of an air film in a liquid flow, **226**, 1991, 319–347
Li, J., Sun, J. & Roux, B.
Numerical study of an oscillating cylinder in uniform flow and in the wake of an upstream cylinder, **237**, 1992, 457–478
Li, X. & Tankin, R. S.
On the temporal instability of a two-dimensional viscous liquid sheet, **226**, 1991, 425–443
Lichter, S. *See* Underhill, Lichter & Bernoff
Lien, L. C. *See* Keh & Lien
Lighthill, J.
Acoustic streaming in the ear itself, **239**, 1992, 551–606

Limat, L. *See* Fermigier, Limat, Wesfreid, Boudinet & Quilliet
Lin, A.-C. *See* Wong & Lin
Lin, Q., Lindberg, W. R., Boyer, D. L. & Fernando, H. J. S.
Stratified flow past a sphere, **240**, 1992, 315–354
Lin, S. P. & Ibrahim, E. A.
Corrigendum to 'Instability of a viscous liquid jet surrounded by a viscous gas in a vertical pipe, vol. 218 (1990), pp. 641–658', **240**, 1992, 685–686
Lindberg, W. R. *See* Lin, Lindberg, Boyer & Fernando
Linden, P. F. *See* O'Donnell & Linden
Linton, C. M. *See* Callan, Linton & Evans; Evans & Linton
Liou, B.-H. *See* Chang, Liou & Chern
Liron, N. & Barta, E.
Motion of a rigid particle in Stokes flow: a new second-kind boundary-integral equation formulation, **238**, 1992, 579–598
Lister, J. R. *See* Huppert, Kerr, Lister & Turner
Liu, J. T. C. *See* Mankbadi & Liu; Sabry & Liu
Liu, P. L.-F. *See* Iskandarani & Liu
Liu, P. L.-F., Synolakis, C. E. & Yeh, H. H.
Report on the International Workshop on Long-Wave Run-up, **229**, 1991, 675–688
Liu, X. & Rodi, W.
Experiments on transitional boundary layers with wake-induced unsteadiness, **231**, 1991, 229–256
Loewen, M. R. & Melville, W. K.
Microwave backscatter and acoustic radiation from breaking waves, **224**, 1991, 601–623
Long, T. A. *See* Petersen & Long
Long, T. A. & Petersen, R. A.
Controlled interactions in a forced axisymmetric jet. Part 1. The distortion of the mean flow, **235**, 1991, 37–55
Longmire, E. K. & Eaton, J. K.
Structure of a particle-laden round jet, **236**, 1992, 217–257
Longuet-Higgins, M. S.
The sound field due to an oscillating bubble near an indented free surface, **221**, 1990, 675–683
Resonance in nonlinear bubble oscillations, **224**, 1991, 531–549
Theory of weakly damped Stokes waves: a new formulation and its physical interpretation, **235**, 1991, 319–324
Capillary rollers and bores, **240**, 1992, 659–679
See also Miller, Shemdin & Longuet-Higgins
Longuet-Higgins, M. S., Kerman, B. R. & Lunde, K.
The release of air bubbles from an underwater nozzle, **230**, 1991, 365–390
Loper, D. E. *See* Eltayeb & Loper
Lopez, J. M.
Axisymmetric vortex breakdown. Part 1. Confined swirling flow, **221**, 1990, 533–552
See also Brown & Lopez
Lopez, J. M. & Perry, A. D.
Axisymmetric vortex breakdown. Part 3. Onset of periodic flow and chaotic advection, **234**, 1991, 449–471
Lord, R. G.
Direct simulation Monte Carlo calculations of rarefied flows with incomplete surface accommodation, **239**, 1992, 449–459
Losada, M. A. *See* Dalrymple, Losada & Martin
Louge, M. Y., Mastorakos, E. & Jenkins, J. T.
The role of particle collisions in pneumatic transport, **231**, 1991, 345–359
Low, H. T. *See* Chew, Low, Wong & Tan
Lu, H. -L. & Apfel, R. E.
Shape oscillations of drops in the presence of surfactants, **222**, 1991, 351–368
Lu, L. J. & Smith, C. R.
Use of flow visualization data to examine spatial–temporal velocity and burst-type characteristics in a turbulent boundary layer, **232**, 1991, 303–340
Lucey, A. D. & Carpenter, P. W.
A numerical simulation of the interaction of a compliant wall and inviscid flow, **234**, 1991, 121–146
Luchini, P., Manzo, F. & Pozzi, A.
Resistance of a grooved surface to parallel flow and cross-flow, **228**, 1991, 87–109
Lugt, H. J. *See* Ohring & Lugt
Lugt, H. J. & Ohring, S.
The oblique ascent of a viscous vortex pair toward a free surface, **236**, 1992, 461–476
Lumley, J. L. *See* Berkooz, Holmes & Lumley
Lun, C. K. K.
Kinetic theory for granular flow of dense, slightly inelastic, slightly rough spheres, **233**, 1991, 539–559
Lundbladh, A. & Johansson, A. V.
Direct simulation of turbulent spots in plane Couette flow, **229**, 1991, 499–516
Lunde, K. *See* Longuet-Higgins, Kerman & Lunde
Lundgren, T. S. & Mansour, N. N.
Vortex ring bubbles, **224**, 1991, 177–196
Lundgren, T. S., Yao, J. & Mansour, N. N.
Microburst modelling and scaling, **239**, 1992, 461–488
Lutsko, J. *See* Aurell, Frisch, Lutsko & Vergassola
Lynov, J. P., Nielsen, A. H., Pécseli, H. L. & Rasmussen, J. J.
Studies of the Eulerian–Lagrangian transformation in two-dimensional random flows, **224**, 1991, 485–505

Ma, H. *See* Boyd & Ma
MacCready, P. & Rhines, P. B.
Buoyant inhibition of Ekman transport on a slope and its effect on stratified spin-up, **223**, 1991, 631–661
McDonald, N. R. & Imberger, J.
A line sink in a rotating stratified fluid, **233**, 1991, 349–368
Withdrawal of a stratified fluid from a rotating channel, **235**, 1991, 643–664
McIver, P. *See* Evans & McIver
McKinley, G. H., Raiford, W. P., Brown, R. A. & Armstrong, R. C.
Nonlinear dynamics of viscoelastic flow in axisymmetric abrupt contractions, **223**, 1991, 411–456
McLachlan, R.
A steady separated viscous corner flow, **231**, 1991, 1–34
McLaughlin, J. B.
Inertial migration of a small sphere in linear shear flows, **224**, 1991, 261–274
Maekawa, H., Mansour, N. N. & Buell, J. C.
Instability mode interactions in a spatially developing plane wake, **235**, 1991, 223–254
Magness, C. *See* Nuzzi, Magness & Rockwell
Mahdmina, D. *See* Hocking & Mahdmina
Maldarelli, C. *See* Chen, Dagan & Maldarelli; Georgiou, Papangeorgiou, Maldarelli & Rumschitzki; He, Dagan & Maldarelli
Malik, M. R. *See* Balakumar & Malik
Malik, M. R. & Spall, R. E.
On the stability of compressible flow past axisymmetric bodies, **228**, 1991, 443–463
Malik, N. A. *See* Fung, Hunt, Malik & Perkins
Maltrud, M. E. & Vallis, G. K.
Energy spectra and coherent structures in forced two-dimensional and beta-plane turbulence, **228**, 1991, 321–342
Manin, D. Yu. *See* Dolzhanskii, Krymov & Manin
Mankbadi, R. R. & Liu, J. T. C.
Near-wall response in turbulent shear flows subjected to imposed unsteadiness, **238**, 1992, 55–71
Manolis, G. D. *See* Pelekasis, Tsamopoulos & Manolis
Mansour, N. N. *See* Lundgren & Mansour; Lundgren, Yao & Mansour; Maekawa, Mansour & Buell
Mansy, H. *See* Williams, Mansy & Amato
Manzo, F. *See* Luchini, Manzo & Pozzi
Marasli, B., Champagne, F. H. & Wygnanski, I.
Effect of travelling waves on the growth of a plane turbulent wake, **235**, 1991, 511–528
Marchant, T. R. & Smyth, N. F.
The extended Korteweg–de Vries equation and the resonant flow of a fluid over topography, **221**, 1990, 263–288
Marcus, P. S. *See* Coughlin & Marcus
Marshall, J. S.
A general theory of curved vortices with circular cross-section and variable core area, **229**, 1991, 311–338
Marston, P. L. *See* Filler, Marston & Mih
Martin, J. E. & Meiburg, E.
Numerical investigation of three-dimensionally evolving jets subject to axisymmetric and azimuthal perturbations, **230**, 1991, 271–318
Martin, P. A. *See* Dalrymple, Losada & Martin
Maslowe, S. A.
Barotropic instability of the Bickley jet, **229**, 1991, 417–426
Mastorakos, E. *See* Louge, Mastorakos & Jenkins
Matthews, P. C., Hurlburt, N. E., Proctor, M. R. E. & Brownjohn, D. P.
Compressible magnetoconvection in oblique fields: linearized theory and simple nonlinear models, **240**, 1992, 559–569
Mauri, R. *See* Acrivos, Batchelor, Hinch, Koch & Mauri
Maxworthy, T.
Bubble rise under an inclined plate, **229**, 1991, 659–674
See also Narimousa, Maxworthy & Spedding
Mayer, E. W. & Powell, K. G.
Similarity solutions for viscous vortex cores, **238**, 1992, 487–507
Mazumder, B. S. & Das, S. K.
Effect of boundary reaction on solute dispersion in pulsatile flow through a tube, **239**, 1992, 523–549
McCready, M. J. *See* Jurman, Deutsch & McCready
McIntyre, T. J., Houwing, A. F. P., Sandeman, R. J. & Bachor, H.-A.
Relaxation behind shock waves in ionizing neon, **227**, 1991, 617–640
Mdivnishvili, M. O. *See* Barkhudarov, Mdivnishvili, Sokolov, Taktakishvili & Terekhin
Mehta, R. D. *See* Bell & Mehta
Mei, C. C. *See* Hara & Mei; Naciri & Mei
Mei, C. C. & Auriault, J.-L.
The effect of weak inertia on flow through a porous medium, **222**, 1991, 647–663
Mei, C. C. & Zhou, X.
Parametric resonance of a spherical bubble, **229**, 1991, 29–50
Mei, R. & Adrian, R. J.
Flow past a sphere with an oscillation in the free-stream velocity and unsteady drag at finite Reynolds number, **237**, 1992, 323–341
Mei, R., Adrian, R. J. & Hanratty, T. J.
Particle dispersion in isotropic turbulence under Stokes drag and Basset force with gravitational settling, **225**, 1991, 481–495

Mei, R., Lawrence, C. J. & Adrian, R. J.
Unsteady drag on a sphere at finite Reynolds number with small fluctuations in the free-stream velocity, **233**, 1991, 613–631
Meiburg, E. *See* Martin & Meiburg
Meiburg, E. & Newton, P. K.
Particle dynamics and mixing in a viscously decaying shear layer, **227**, 1991, 211–244
Meier, G. E. A. *See* Kurschat, Chaves & Meier; Selerowicz, Szumowski & Meier
Meiron, D. I. *See* Soibelman & Meiron
Melville, W. K. *See* Loewen & Melville; Tomasson & Melville
Meneguzzi, M. *See* Vincent & Meneguzzi
Meneveau, C.
Analysis of turbulence in the orthonormal wavelet representation, **232**, 1991, 469–520
Meneveau, C. & Sreenivasan, K. R.
The multifractal nature of turbulent energy dissipation, **224**, 1991, 429–484
Merlen, A. & Dyment, A.
Similarity and asymptotic analysis for gun-firing aerodynamics, **225**, 1991, 497–528
Messiter, A. F. *See* Joo, Messiter & Schultz
Métais, O. *See* Herring & Métais
Métais, O. & Lesieur, M.
Spectral large-eddy simulation of isotropic and stably stratified turbulence, **239**, 1992, 157–194
Miesen, R., Beijnon, G., Duijvestijn, P. E. M., Oliemans, R. V. A. & Verheggen, T.
Interfacial waves in core–annular flow, **238**, 1992, 97–117
Mih, W. C. *See* Filler, Marston & Mih
Miksad, R. W. *See* Hajj, Miksad & Powers
Miksis, M. J. *See* Haley & Miksis
Miles, J. W.
The capillary boundary layer for standing waves, **222**, 1991, 197–205
Wave motion in a viscous fluid of variable depth. Part 2. Moving contact line, **223**, 1991, 47–55
On the initial-value problem for a wave-maker, **229**, 1991, 589–601
Variational approximations for gravity waves in water of variable depth, **232**, 1991, 681–688
See also Becker & Miles; Henderson & Miles
Milgram, J. H. *See* Ölmez & Milgram
Milinazzo, F. A. *See* Caponi, Yuen, Milinazzo & Saffman
Miller, S. J., Shemdin, O. H. & Longuet-Higgins, M. S.
Laboratory measurements of modulation of short-wave slopes by long surface waves, **233**, 1991, 389–404
Miller, T. L. & Reynolds, N. D.
A study of baroclinic instability in a cylindrical annulus with the temperature gradient imposed on the lower surface, **233**, 1991, 495–518
Milliken, W. J. *See* Szeri, Milliken & Leal
Milner, S. T.
Square patterns and secondary instabilities in driven capillary waves, **225**, 1991, 81–100
Milton, G. W. *See* Smereka & Milton
Minev, P. D. *See* Shopov & Minev
Miyazaki, T. *See* Fukumoto & Miyazaki
Mizushima, J. & Fujimura, K.
Higher harmonic resonance of two-dimensional disturbances in Rayleigh–Bénard convection, **234**, 1991, 651–667
Modi, V. *See* Çabuk & Modi
Moin, P. *See* Colonius, Lele & Moin; Jimenez & Moin
Moiseev, S. S. *See* Khomenko, Moiseev & Tur
Moon, T. J., Hua, T. Q. & Walker, J. S.
Liquid-metal flow in a backward elbow in the plane of a strong magnetic field, **227**, 1991, 273–292
Moore, D. R., Weiss, N. O. & Wilkins, J. M.
Asymmetric oscillations in thermosolutal convection, **233**, 1991, 561–585
Moroz, I. M. *See* Leibovich, Lele & Moroz
Mory, M.
A model of turbulent mixing across a density interface including the effect of rotation, **223**, 1991, 193–207
See also Fleury, Mory, Hopfinger & Auchere
Moser, R. D. *See* Vastano & Moser
Muller, S. J. *See* Shaqfeh, Muller & Larson
Müller, U. *See* Zimmermann, Müller & Davis
Mullin, T. *See* Tavener, Mullin & Cliffe
Münch, W. *See* Drummond & Münch
Muntz, E. P. *See* Pham-Van-Diep, Erwin & Muntz
Murakami, Y. *See* Komori, Hunt, Kanzaki & Murakami
Murphy, W. F. *See* Auzerais, Jackson, Russel & Murphy
Myers, M. K.
Transport of energy by disturbances in arbitrary steady flows, **226**, 1991, 383–400

Naciri, M. & Mei, C. C.
Evolution of a short surface wave on a very long surface wave of finite amplitude, **235**, 1991, 415–452
Nadim, A. *See* Stone, Nadim & Strogatz
Nagata, M. *See* Weisshaar, Busse & Nagata
Nagib, H. M. *See* Corke, Shakib & Nagib; Wark & Nagib
Nakamura, Y. *See* Ohya, Nakamura, Ozono, Tsuruta & Nakayama
Nakamura, Y., Ohya, Y. & Tsuruta, H.
Experiments on vortex shedding from flat plates with square leading and trailing edges, **222**, 1991, 437–447
Nakayama, R. *See* Ohya, Nakamura, Ozono, Tsuruta & Nakayama

Nandakumar, K. & Weinitschke, H. J.
A bifurcation study of mixed-convection heat transfer in horizontal ducts, **231**, 1991, 157–187
Nansteel, M. W. *See* Yu & Nansteel
Narimousa, S., Maxworthy, T. & Spedding, G. R.
Experiments on the structure and dynamics of forced, quasi-two-dimensional turbulence, **223**, 1991, 113–133
Nelson, J. *See* Joseph, Nelson, Renardy & Renardy
Newberger, P. A. *See* Allen, Samelson & Newberger
Newton, P. K. *See* Meiburg & Newton
Niccum, D. L. *See* Strykowski & Niccum
Nielsen, A. H. *See* Lynov, Nielsen, Pécseli & Rasmussen
Nitsche, J. M. *See* Batchelor & Nitsche
Noack, B. R., Ohle, F. & Eckelmann, H.
On cell formation in vortex streets, **227**, 1991, 293–308
Nobili, M. *See* Cocciaro, Faetti & Nobili
Noh, Y. & Fernando, H. J. S.
The motion of a buoyant cloud along an incline in the presence of boundary mixing, **235**, 1991, 557–577
Nossen, J., Grue, J. & Palm, E.
Wave forces on three-dimensional floating bodies with small forward speed, **227**, 1991, 135–160
Nuzzi, F., Magness, C. & Rockwell, D.
Three-dimensional vortex formation from an oscillating, non-uniform cylinder, **238**, 1992, 31–54
Nygaard, K. J. & Glezer, A.
Evolution of streamwise vortices and generation of small-scale motion in a plane mixing layer, **231**, 1991, 257–301

O'Brien, S. B. G.
On the shape of small sessile and pendant drops by singular perturbation techniques, **233**, 1991, 519–537
Ockendon, J. R. *See* Howison, Ockendon & Wilson; O'Malley, Fitt, Jones, Ockendon & Wilmott
O'Donnell, J. & Linden, P. F.
Free-surface effects on the spin-up of fluid in a rotating cylinder, **232**, 1991, 439–453
Ogawa, M., Schubert, G. & Zebib, A.
Numerical simulations of three-dimensional thermal convection in a fluid with strongly temperature-dependent viscosity, **233**, 1991, 299–328
Oğuz, H. N. & Prosperetti, A.
Numerical calculation of the underwater noise of rain, **228**, 1991, 417–442
Ohle, F. *See* Noack, Ohle & Eckelmann
Ohmi, K., Coutanceau, M., Daube, O. & Ta Phuoc Loc
Further experiments on vortex formation around an oscillating and translating airfoil at large incidences, **225**, 1991, 607–630
Ohring, S. *See* Lugt & Ohring
Ohring, S. & Lugt, H. J.
Interaction of a viscous vortex pair with a free surface, **227**, 1991, 47–70
Ohsumi, T. K. *See* David & Ohsumi
Ohya, Y. *See* Nakamura, Ohya & Tsuruta
Ohya, Y., Nakamura, Y., Ozono, S., Tsuruta, H. & Nakayama, R.
A numerical study of vortex shedding from flat plates with square leading and trailing edges, **236**, 1992, 445–460
Oliemans, R. V. A. *See* Miesen, Beijnon, Duijvestijn, Oliemans & Verheggen
Ölmez, H. S. & Milgram, J. H.
An experimental study of attenuation of short water waves by turbulence, **239**, 1992, 133–156
O'Malley, K., Fitt, A. D., Jones, T. V., Ockendon, J. R. & Wilmott, P.
Models for high-Reynolds-number flow down a step, **222**, 1991, 139–155
Orszag, S. A. *See* Kaiktsis, Karniadakis & Orszag
Ottino, J. M. *See* Kusch & Ottino; Tjahjadi & Ottino
Otto, S. R.
On stability of flow around an oscillating sphere, **239**, 1992, 47–63
Owen, J. M. *See* Gilham, Ivey, Owen & Pincombe
Özdemir, İ. B. & Whitelaw, J. H.
Impingement of an axisymmetric jet on unheated and heated flat plates, **240**, 1992, 503–532
Ozono, S. *See* Ohya, Nakamura, Ozono, Tsuruta & Nakayama

Page, M. A. & Johnson, E. R.
Flow past cylindrical obstacles on a beta-plane, **221**, 1990, 349–382
Palm, E.
Nonlinear wave reflection from a submerged circular cylinder, **233**, 1991, 49–63
See also Nossen, Grue & Palm
Pampaloni, E., Pérez-García, C., Albavetti, L. & Ciliberto, S.
Transition from hexagons to rolls in convection in fluids under non-Boussinesq conditions, **234**, 1991, 393–416
Panaras, A. G.
Numerical investigation of the high-speed conical flow past a sharp fin, **236**, 1992, 607–633
Papageorgiu, D. *See* Hall, Balakumar & Papageorgiu

Papangeorgiou, D. T. *See* Georgiou, Papangeorgiou, Maldarelli & Rumschitzki
Papanicolaou, E. & Jaluria, Y.
Transition to a periodic regime in mixed convection in a square cavity, **239**, 1992, 489–509
Park, J. S. *See* Hyun & Park
Park, W. J. & Cimbala, J. M.
The effect of jet injection geometry on two-dimensional momentumless wakes, **224**, 1991, 29–47
Patterson, J. C. *See* Armfield & Patterson
Peake, N. & Crighton, D. G.
Lighthill quadrupole radiation in supersonic propeller acoustics, **223**, 1991, 363–382
An asymptotic theory of near-field propeller acoustics, **232**, 1991, 285–301
Pécseli, H. L. *See* Lynov, Nielsen, Pécseli & Rasmussen
Pedelty, J. A. & Woodward, P. R.
Numerical simulations of the nonlinear kink modes in linearly stable supersonic slip surfaces, **225**, 1991, 101–120
Pedley, T. J. *See* Johnson, Kamm, Ho, Shapiro & Pedley
Pedlosky, J. *See* Pratt & Pedlosky; Samelson & Pedlosky
Pelcé, P. & Rochwerger, D.
Vibratory instability of cellular flames propagating in tubes, **239**, 1992, 293–307
Pelekasis, N. A., Tsamopoulos, J. A. & Manolis, G. D.
Nonlinear oscillations of liquid shells in zero gravity, **230**, 1991, 541–582
Peltier, W. R. *See* Klaassen & Peltier; Smyth & Peltier
Pérez-García, C. *See* Pampaloni, Pérez-García, Albavetti & Ciliberto
Peridier, V. J., Smith, F. T. & Walker, J. D. A.
Vortex-induced boundary-layer separation. Part 1. The unsteady limit problem $Re \to \infty$, **232**, 1991, 99–131
Vortex-induced boundary-layer separation. Part 2. Unsteady interacting boundary-layer theory, **232**, 1991, 133–165
Perkins, R. J. *See* Fung, Hunt, Malik & Perkins
Perlin, M. & Hammack, J.
Experiments on ripple instabilities. Part 3. Resonant quartets of the Benjamin–Feir type, **229**, 1991, 229–268
Perrie, W. *See* Resio & Perrie
Perry, A. D. *See* Lopez & Perry
Petersen, R. A. *See* Long & Petersen
Petersen, R. A. & Clough, R. C.
The influence of higher harmonics on vortex pairing in an axisymmetric mixing layer, **239**, 1992, 81–98
Petersen, R. A. & Long, T. A.
Controlled interactions in a forced axisymmetric jet. Part 2. The modulation of broadband turbulence, **235**, 1991, 57–72
Petipas, C. *See* Bruneau, Anthore, Feuillebois, Auvray & Petipas
Petrie, H. L. *See* Fontaine, Petrie & Brungart
Pham-Van-Diep, G. C., Erwin, D. A. & Muntz, E. P.
Testing continuum descriptions of low-Mach-number shock structures, **232**, 1991, 403–413
Phan-Thien, N., Tran-Cong, T. & Graham, A. L.
Shear flow of periodic arrays of particle clusters: a boundary-element method, **228**, 1991, 275–293
Phillips, O. M. *See* Salmun & Phillips
Phillips, R. J. *See* Rajagopalan, Phillips, Armstrong, Brown & Bose
Pierrehumbert, R. T. *See* Lamb & Pierrehumbert
Pietrzak, J. D. *See* Kranenburg, Pietrzak & Abraham
Pincombe, J. R. *See* Gilham, Ivey, Owen & Pincombe
Pinho, F. T. & Whitelaw, J. H.
Flow of non-Newtonian fluids over a confined baffle, **226**, 1991, 475–496
Platten, J. K. *See* Villers & Platten
Pointsot, T., Veynante, D. & Candel, S.
Quenching processes and premixed turbulent combustion diagrams, **228**, 1991, 561–606
Polvani, L. M.
Two-layer geostrophic vortex dynamics. Part 2. Alignment and two-layer V-states, **225**, 1991, 241–270
See also Dritschel & Polvani
Ponomarev, V. M. *See* Gledzer & Ponomarev
Poo, J. Y. *See* Ashgriz & Poo
Pope, S. B. *See* Girimaji & Pope
Powell, K. G. *See* Mayer & Powell
Powers, E. J. *See* Hajj, Miksad & Powers
Pozrikidis, C.
The buoyancy-driven motion of a train of viscous drops within a cylindrical tube, **237**, 1992, 627–648
Pozzi, A. *See* Luchini, Manzo & Pozzi
Prakash, J. R. & Rao, K. K.
Steady compressible flow of cohesionless granular materials through a wedge-shaped bunker, **225**, 1991, 21–80
Praskovsky, A. A. *See* Tatarskii, Dubovikov, Praskovsky & Karyakin
Pratt, L. J. & Pedlosky, J.
Linear and nonlinear barotropic instability of geostrophic shear layers, **224**, 1991, 49–76
Pratte, J. M. & Hart, J. E.
Experiments on periodically forced flow over topography in a rotating fluid, **229**, 1991, 87–114

Proctor, M. R. E. *See* Knobloch, Proctor & Weiss; Matthews, Hurlburt, Proctor & Brownjohn

Prokopiou, Th., Cheng, M. & Chang, H.-C.
Long waves on inclined films at high Reynolds number, **222**, 1991, 665–691

Prosperetti, A.
The thermal behaviour of oscillating gas bubbles, **222**, 1991, 687–615
See also Lezzi & Prosperetti; Oğuz & Prosperetti

Puckett, E. G. *See* Henderson, Colella & Puckett

Quilliet, C. *See* Fermigier, Limat, Wesfreid, Boudinet & Quilliet

Rabbitt, R. D. & Damiano, E. R.
A hydroelastic model of macromechanics in the endolymphatic vestibular canal, **238**, 1992, 337–369

Radder, A. C.
An explicit Hamiltonian formulation of surface waves in water of finite depth, **237**, 1992, 435–455

Raiford, W. P. *See* McKinley, Raiford, Brown & Armstrong

Rajagopalan, D., Phillips, R. J., Armstrong, R. C., Brown, R. A. & Bose, A.
The influence of viscoelasticity on the existence of steady solutions in two-dimensional rimming flow, **235**, 1991, 611–642

Ramé, E. *See* Dussan V., Ramé & Garoff

Ran, B. & Katz, J.
The response of microscopic bubbles to sudden changes in the ambient pressure, **224**, 1991, 91–115

Rao, K. K. *See* Prakash & Rao

Rasmussen, J. J. *See* Lynov, Nielsen, Pécseli & Rasmussen

Read, P. L., Bell, M. J., Johnson, D. W. & Small, R. M.
Quasi-periodic and chaotic flow regimes in a thermally driven, rotating fluid annulus, **238**, 1992, 599–632

Reisfeld, B. & Bankoff, S. G.
Non-isothermal flow of a liquid film on a horizontal cylinder, **236**, 1992, 167–196

Renardy, M. *See* Joseph, Nelson, Renardy & Renardy

Renardy, Y. *See* Joseph, Nelson, Renardy & Renardy

Resio, D. & Perrie, W.
A numerical study of nonlinear energy fluxes due to wave–wave interactions. Part 1. Methodology and basic results, **223**, 1991, 603–629

Rey, V., Belzons, M. & Guazzelli, E.
Propagation of surface gravity waves over a rectangular submerged bar, **235**, 1991, 453–479

Reynolds, N. D. *See* Miller & Reynolds

Reynolds, W. C. *See* Brereton, Reynolds & Jayaraman; Sandham & Reynolds

Reznik, G. M.
Dynamics of singular vortices on a beta-plane, **240**, 1992, 405–432

Rhines, P. B. *See* MacCready & Rhines

Richards, K. J., Smeed, D. A., Hopfinger, E. J. & Chabert d'Hières, G.
Boundary-layer separation of rotating flows past surface-mounted obstacles, **237**, 1992, 343–371

Riley, D. S. & Winters, K. H.
Time-periodic convection in porous media: the evolution of Hopf bifurcations with aspect ratio, **223**, 1991, 457–474

Riley, J. J. *See* Lelong & Riley

Rindt, C. C. M., Steenhoven, A. A. van, Janssen, J. D. & Vossers, G.
Unsteady entrance flow in a 90° curved tube, **226**, 1991, 445–474

Ripa, P.
General stability conditions for a multi-layer model, **222**, 1991, 119–137
Wave energy-momentum and pseudoenergy-momentum conservation for the layered quasi-geostrophic instability problem, **235**, 1991, 379–398

Robert, R. *See* Sommeria, Staquet & Robert

Robert, R. & Sommeria, J.
Statistical equilibrium states for two-dimensional flows, **229**, 1991, 291–310

Roberts, G. O., Kornfeld, D. M. & Fowlis, W. W.
Particle orbits in a rotating liquid, **229**, 1991, 555–567

Robinson, W. H. *See* Strathdee, Robinson & Haines

Rochwerger, D. *See* Pelcé & Rochwerger; Searby & Rochwerger

Rockwell, D. *See* Nuzzi, Magness & Rockwell

Rodi, W. *See* Liu & Rodi

Roux, B. *See* Ben Hadid & Roux; Li, Sun & Roux

Rucklidge, A. M.
Chaos in models of double convection, **237**, 1992, 209–229

Rudy, D. H. *See* Abarbanel, Don, Gottlieb, Rudy & Townsend

Rumschitzki, D. S. *See* Georgiou, Papangeorgiou, Maldarelli & Rumschitzki

Russel, W. B. *See* Auzerais, Jackson, Russel & Murphy

Ruvinsky, K. D., Feldstein, F. I. & Freidman, G. I.
Numerical simulations of the quasi-stationary stage of ripple excitation by steep

gravity–capillary waves, **230**, 1991, 339–353

Ryrie, S. C.
Mixing by chaotic advection in a class of spatially periodic flows, **236**, 1992, 1–26

Sabry, A. S. & Liu, J. T. C.
Longitudinal vorticity elements in boundary layers: nonlinear development from initial Görtler vortices as a prototype problem, **231**, 1991, 615–663

Saddoughi, S. G. & Joubert, P. N.
Lateral straining of turbulent boundary layers. Part 1. Streamline divergence, **229**, 1991, 173–204

Saetran, L. R. *See* Bilger, Saetran & Krishnamoorthy

Saffman, P. G. *See* Caponi, Yuen, Milinazzo & Saffman

Salmun, H. & Phillips, O. M.
An experiment on boundary mixing. Part 2. The slope dependence at small angles, **240**, 1992, 355–377

Samelson, R. M. *See* Allen, Samelson & Newberger

Samelson, R. M. & Pedlosky, J.
Local baroclinic instability of flow over variable topography, **221**, 1990, 411–436

Sand, I. Ø.
On unsteady reacting flow in a channel with a cavity, **229**, 1991, 339–364

Sandeman, R. J. *See* McIntyre, Houwing, Sandeman & Bachor

Sandham, N. D. & Reynolds, W. C.
Three-dimensional simulations of large eddies in the compressible mixing layer, **224**, 1991, 133–158

Sangani, A. S.
A pairwise interaction theory for determining the linear acoustic properties of dilute bubbly liquids, **232**, 1991, 221–284

Sarkar, S. *See* Speziale, Sarkar & Gatski

Sarkar, S., Erlebacher, G., Hussaini, M. Y. & Kreiss, H. O.
The analysis and modelling of dilatational terms in compressible turbulence, **227**, 1991, 473–493

Savaş, Ö.
Spin-down to rest in a cylindrical cavity, **234**, 1991, 529–552

Saville, D. A. *See* Vizika & Saville

Savirón, J. M. *See* Arroyo & Savirón

Sawford, B. L. *See* Borgas & Sawford

Schladow, S. G., Thomas, E. & Koseff, J. R.
The dynamics of intrusions into a thermohaline stratification, **236**, 1992, 127–165

Schmidt, M. *See* Fennel & Schmidt

Schubert, G. *See* Bercovici, Schubert & Glatzmaier; Ogawa, Schubert & Zebib

Schultz, W. W. *See* Joo, Messiter & Schultz

Schumann, U. *See* Krettenauer & Schumann

Schwartz, L. W. *See* Tuck & Schwartz

Searby, G. & Rochwerger, D.
A parametric acoustic instability in premixed flames, **231**, 1991, 529–543

Secomb, T. W. *See* Halpern & Secomb

Seifert, A. *See* Katz, Seifert & Wygnanski

Selerowicz, W. C., Szumowski, A. P. & Meier, G. E. A.
Self-excited compressible flow in a pipe–collar nozzle, **228**, 1991, 465–485

Sellier, A. *See* Guermond & Sellier

Sen, M. *See* Ghosh, Chang & Sen

Sen, R. *See* Cramer & Sen

Shakib, F. *See* Corke, Shakib & Nagib

Shapiro, A. H. *See* Akhavan, Kamm & Shapiro; Johnson, Kamm, Ho, Shapiro & Pedley; Sharp, Kamm, Shapiro, Kimmel & Karniadakis

Shaqfeh, E. S. G. *See* Koch & Shaqfeh

Shaqfeh, E. S. G., Muller, S. J. & Larson, R. G.
The effects of gap width and dilute solution properties on the viscoelastic Taylor–Couette instability, **235**, 1991, 285–317

Sharp, M. K., Kamm, R. D., Shapiro, A. H., Kimmel, E. & Karniadakis, G. E.
Dispersion in a curved tube during oscillatory flow, **223**, 1991, 537–563

Shemdin, O. H. *See* Miller, Shemdin & Longuet-Higgins

Shen, S. S.
Forced solitary waves and hydraulic falls in two-layer flows, **234**, 1991, 583–612

Shepherd, T. G. *See* Dritschel, Haynes, Juckes & Shepherd

Shiono, K. & Knight, D. W.
Turbulent open-channel flows with variable depth across the channel, **222**, 1991, 617–646 (and Corrigendum, **231**, 1991, 693)

Shopov, P. J. & Minev, P. D.
The unsteady motion of a bubble or drop towards a liquid–liquid interface, **235**, 1991, 123–141

Shrira, V. I. *See* Gnevyshev & Shrira

Shtern, V. *See* Goldshtik, Hussain & Shtern

Shukhman, I. G.
Nonlinear evolution of spiral density waves generated by the instability of the shear layer in a rotating compressible fluid, **233**, 1991, 587–612

Singer, B. A. & Zang, T. A.
Tollmien–Schlichting wave/Dean vortex interactions in curved channel flow, **240**, 1992, 681–684

Singer, J. *See* Wang, Singer & Bau

Sirovich, L. *See* Deane & Sirovich

Sirovich, L. & Deane, A. E.
A computational study of Rayleigh–Bénard convection. Part 2. Dimension considerations, **222**, 1991, 251–265
Sleath, J. F. A. *See* Dick & Sleath
Small, R. M. *See* Read, Bell, Johnson & Small
Smeed, D. A. *See* Richards, Smeed, Hopfinger & Chabert d'Hières
Smereka, P. & Milton, G. W.
Bubbly flow and its relation to conduction in composites, **233**, 1991, 65–81
Smith, C. R. *See* Lu & Smith
Smith, F. T. *See* Bennett, Hall & Smith; Degani, Smith & Walker; Hall & Smith; Peridier, Smith & Walker
Smith, F. T. & Khorrami, A. F.
The interactive breakdown in supersonic ramp flow, **224**, 1991, 197–215
Smith, L. M.
Turbulent Couette flow profiles that maximize the efficiency function, **227**, 1991, 509–525
Smith, P. A. *See* Stansby & Smith
Smith, R. W.
A ray method for near-shore plumes in a shallow-water flow, **224**, 1991, 227–239
Wind-augmented transport and dilution in shallow-water flows, **228**, 1991, 549–560
Smith, R. W. & Walton, I.
A Burgers concentration dispersion equation, **239**, 1992, 65–80
Smits, A. J. *See* Baskaran, Smits & Joubert; Spina, Donovan & Smits
Smyth, N. F. *See* Marchant & Smyth
Smyth, W. D. & Peltier, W. R.
Instability and transition in finite-amplitude Kelvin–Helmholtz and Holmboe waves, **228**, 1991, 387–415
Sneyd, A. D.
Interfacial instabilities in aluminium reduction cells, **236**, 1992, 111–126
See also Galpin, Fautrelle & Sneyd
So, R. M. C. *See* Lai & So
Soibelman, I. & Meiron, D. I.
Finite-amplitude bifurcations in plane Poiseuille flow: two-dimensional Hopf bifurcation, **229**, 1991, 389–416
Sokolov, I. V. *See* Barkhudarov, Mdivnishvili, Sokolov, Taktakishvili & Terekhin
Sommeria, J. *See* Robert & Sommeria
Sommeria, J., Staquet, C. & Robert, R.
Final equilibrium state of a two-dimensional shear layer, **233**, 1991, 661–689
Spalart, P. R. *See* Yang, Spalart & Ferziger
Spall, R. E. *See* Malik & Spall
Spatschek, K. H. *See* Laedke & Spatschek
Spedding, G. R. *See* Narimousa, Maxworthy & Spedding
Speziale, C. G. *See* Erlebacher, Hussaini, Speziale & Zang
Speziale, C. G., Sarkar, S. & Gatski, T. B.
Modelling the pressure–strain correlation of turbulence: an invariant dynamical systems approach, **227**, 1991, 245–272
Spina, E. F., Donovan, J. F. & Smits, A. J.
On the structure of high-Reynolds-number supersonic turbulent boundary layers, **222**, 1991, 293–327
Squires, K. D. & Eaton, J. K.
Measurements of particle dispersion obtained from direct numerical simulations of isotropic turbulence, **226**, 1991, 1–35
Sreenivasan, K. R. *See* Meneveau & Sreenivasan
Stansby, P. K. & Smith, P. A.
Viscous forces on a circular cylinder in orbital flow at low Keulegan–Carpenter numbers, **229**, 1991, 159–171
Staquet, C. *See* Sommeria, Staquet & Robert
Steen, P. H. *See* Dijkstra & Steen; Graham & Steen
Steenhoven, A. A. van *See* Rindt, Steenhoven, Janssen & Vossers
Steenhoven, A. A. van & Beucken, F. J. H. M. van der
Dynamical analysis of electrochemical wall shear rate measurements, **231**, 1991, 599–614
Stern, M. E.
Blocking an inviscid shear flow, **227**, 1991, 449–472
Entrainment of an eddy at the edge of a jet, **228**, 1991, 343–360
Sternberg, P. *See* Craig & Sternberg
Stock, D. E. *See* Kallio & Stock
Stocker, T. F. & Johnson, E. R.
The trapping and scattering of topographic waves by estuaries and headlands, **222**, 1991, 501–524
Stolzenbach, K. D. *See* Bowen & Stolzenbach
Stone, H. A., Nadim, A. & Strogatz, S. H.
Chaotic streamlines inside drops immersed in steady Stokes flows, **232**, 1991, 629–646
Storesletten, L. *See* Tyvand & Storesletten
Stover, C. A., Koch, D. L. & Cohen, C.
Observations of fibre orientation in simple shear flow of semi-dilute suspensions, **238**, 1992, 277–296
Strathdee, J., Robinson, W. H. & Haines, E. M.
Moving loads on ice plates of finite thickness, **226**, 1991, 37–61
Strogatz, S. H. *See* Stone, Nadim & Strogatz
Strykowski, P. J. & Niccum, D. L.
The stability of countercurrent mixing layers in circular jets, **227**, 1991, 309–343
Sudo, K., Sumida, M. & Yamane, R.
Secondary motion of fully developed oscillatory flow in a curved pipe, **237**, 1992, 189–208

Sugata, S. & Yoden, S.
The effects of centrifugal force on the stability of axisymmetric viscous flow in a rotating annulus, **229**, 1991, 471–482
Sugimoto, N.
Burgers equation with a fractional derivative; hereditary effects on nonlinear acoustic waves, **225**, 1991, 631–653
Suh, K. D., Dalrymple, R. A. & Kirby, J. T.
An angular spectrum model for propagation of Stokes waves, **221**, 1990, 205–232
Sulisz, W. *See* Hudspeth & Sulisz
Sumer, B. M., Jensen, B. L. & Fredsoe, J.
Effect of a plane boundary on oscillatory flow around a circular cylinder, **225**, 1991, 271–300
Sumida, M. *See* Sudo, Sumida & Yamane
Sun, J. *See* Li, Sun & Roux
Sundaram, S. E. R. B. *See* Brown, Tappert & Sundaram
Sutyrin, G. G. & Dewar, W. K.
Almost symmetric solitary eddies in a two-layer ocean, **238**, 1992, 633–656
Swaters, G. E.
On the baroclinic instability of cold-core coupled density fronts on a sloping continental shelf, **224**, 1991, 361–382
Swaters, G. E. & Flierl, G. R.
Dynamics of ventilated coherent cold eddies on a sloping bottom, **223**, 1991, 565–587
Switzer, D. W. *See* Koschmieder & Switzer
Synolakis, C. E. *See* Liu, Synolakis & Yeh
Szepessy, S. & Bearman, P. W.
Aspect ratio and end plate effects on vortex shedding from a circular cylinder, **234**, 1991, 191–217
Szeri, A. J., Milliken, W. J. & Leal, L. G.
Rigid particles suspended in time-dependent flows: irregular versus regular motion, disorder versus order, **237**, 1992, 33–56
Szeri, A. J., Wiggins, S. & Leal, L. G.
On the dynamics of suspended microstructure in unsteady, spatially inhomogeneous, two-dimensional fluid flows, **228**, 1991, 207–241
Szumowski, A. P. *See* Selerowicz, Szumowski & Meier

Tabor, M. *See* Dresselhaus & Tabor
Takaoka, M. *See* Kida, Takaoka & Hussain
Takehiro, S. & Hayashi, Y.-Y.
Over-reflection and shear instability in a shallow-water model, **236**, 1992, 259–279
Taktakishvili, M. I. *See* Barkhudarov, Mdivnishvili, Sokolov, Taktakishvili & Terekhin
Tam, C. K. W. & Hu, F. Q.
Resonant instability of ducted free supersonic mixing layers induced by periodic Mach waves, **229**, 1991, 65–85
Tampieri, F. *See* Hunt, Tampieri, Weng & Carruthers
Tan, K. T. *See* Chew, Low, Wong & Tan
Taneda, S.
Visual observations of the flow around a half-submerged oscillating sphere, **227**, 1991, 193–209
Tankin, R. S. *See* Li & Tankin
Tanny, J. *See* Kerpel, Tanny & Tsinober
Ta Phuoc Loc *See* Ohmi, Coutanceau, Daube & Ta Phuoc Loc
Tapperi, F. D. *See* Brown, Tappert & Sundaram
Tarbell, J. M. *See* Wang & Tarbell
Tarkenton, G. M. *See* Cramer & Tarkenton
Tatarskii, V. I., Dubovikov, M. M., Praskovsky, A. A. & Karyakin, M. Yu.
Temperature fluctuation spectrum in the dissipation range for statistically isotropic turbulent flow, **238**, 1992, 683–698
Tavener, S. J., Mullin, T. & Cliffe, K. A.
Novel bifurcation phenomena in a rotating annulus, **229**, 1991, 483–497
Tavoularis, S. *See* Holloway & Tavoularis
Taylor, J. R.
The energetics of breaking events in a resonantly forced internal wave field, **239**, 1992, 309–340
Teitel, M. *See* Antonia, Teitel, Kim & Browne
Terekhin, V. E. *See* Barkhudarov, Mdivnishvili, Sokolov, Taktakishvili & Terekhin
Terzhevik, A. Yu. *See* Zilitinkevich, Kreiman & Terzhevik
Thomas, E. *See* Schladow, Thomas & Koseff
Thomas, M. D.
On the resonant triad interaction in flows over rigid and flexible boundaries, **234**, 1991, 417–441
The nonlinear stability of flows over compliant walls, **239**, 1992, 657–670
Thual, O.
Zero-Prandtl-number convection, **240**, 1992, 229–258
Tidstrom, K. D. *See* Klebanoff, Cleveland & Tidstrom
Tillmark, N. & Alfredsson, P. H.
Experiments on transition in plane Couette flow, **235**, 1991, 89–102
Ting, F. C. K.
On forced internal waves in a rectangular trench, **235**, 1991, 255–283
Tjahjadi, M. & Ottino, J. M.
Stretching and breakup of droplets in chaotic flows, **232**, 1991, 191–219
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Twist vortices and their instabilities in the Taylor–Couette system, **226**, 1991, 549–564

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Acheson, D. J. *Elementary Fluid Dynamics*. Clarendon Press, 1990. (N. Riley) **225**, 1991, 693.

Anile, A. M. *Relativistic Fluids and Magneto-Fluids*. Cambridge University Press, 1990. (D. A. Diver) **238**, 1992, 723.

Atlee Jackson, E. *Perspectives of Nonlinear Dynamics, Vols. 1 and 2*. Cambridge University Press, 1989, 1990. (D. G. Dritschel) **226**, 1991, 655.

Baker, G. L. & Gollub, J. P. *Chaotic Dynamics: An Introduction*. Cambridge University Press, 1990. (J. W. Miles) **223**, 1991, 662.

Barenblatt, G. I. *Dimensional Analysis*. (Translated from the Russian by P. Makenin). Gordon and Breach, 1987. (M. Van Dyke) **235**, 1992, 691.

Barenblatt, G. I., Entov, V. M. & Ryzhik, V. M. *Theories of Fluid Flows through Natural Rocks*. Kluwer Academic Publishers, 1990. (J. R. A. Pearson) **223**, 1991, 663.

Barnes, H. A., Hutton, J. F. & Walters, K. *An Introduction to Rheology*. Elsevier, 1989. (G. I. Barenblatt) **228**, 1991, 694.

Beck, M. S. & Plaskowski, A. *Cross Correlation Flowmeters – Their Design and Application*. Adam Hilger, 1987. (A. M. Savill) **237**, 1992, 692.

Bray, R. J., Cram, L. E., Durrant, C. J. & Loughhead, R. E. *Plasma Loops in the Solar Corona*. Cambridge University Press, 1991. (M. A. Berger) **240**, 1992, 690.

Cleveland, W. S. *The Elements of Graphing Data*. Wadsworth Advanced Books and Software, 1985. (J. O. Kessler) **233**, 1991, 690.

Cumpsty, N. A. *Compressor Aerodynamics*. Longman, 1989. (H. Tubbs) **226**, 1991, 659.

Donnelly, R. J. *Quantized Vortices in Helium II*. Cambridge University Press, 1991. (W. Fiszdon) **233**, 1991, 691.

Dowell, E. H. & Ilgamov, M. *Studies in Nonlinear Aeroelasticity*. Springer, 1988. (D. G. Crighton) **227**, 1991, 690.

Gebhart, B., Jaluria, Y., Mahajan, R. L. & Sammakia, B. *Buoyancy-Induced Flows and Transport*. Springer, 1988. (D. S. Riley) **227**, 1991, 692.

Gennes, P. G. de *Introduction to Polymer Dynamics*. Cambridge University Press, 1990. (M. R. Mackley) **228**, 1991, 695.

Gibert, R.-J. *Vibrations des Structures*. Eyrolles, 1988. (D. G. Crighton) **237**, 1992, 691.

Hirsch, C. *Numerical Computation of Internal and External Flows. Vol. 1, Fundamentals of Numerical Discretization; Vol. 2, Computational Methods for Inviscid and Viscous Flows*. Wiley, 1988; 1990 (D. B. Ingham) **225**, 1991, 691.

Infeld, E. & Rowlands, G. *Nonlinear Waves, Solitons and Chaos*. Cambridge University Press, 1990. (D. H. Peregrine) **230**, 1991, 692.

Johnson, C. *Numerical Solution of Partial Differential Equations by the Finite Element Method*. Cambridge University Press, 1987. (M. A. Kelmanson) **231**, 1991, 689.

Jones, R. T. *Wing Theory*. Princeton University Press, 1990. (N. Riley) **232**, 1991, 692.

Khandekar, M. L. *Operational Analysis and Prediction of Ocean Wind Waves*. Springer, 1989. (G. Komen) **234**, 1991, 692.

KUTZNETSOV, V. R. & SABEL'NIKOV, V. A. *Turbulence and Combustion*. Hemisphere, 1990. (N. PETERS) **227**, 1991, 691.

LENCASTRE, A. *Handbook of Hydraulic Engineering*. Ellis Horwood, 1987. (J. LOVELESS) **230**, 1991, 693.

LEWIS, R. I. *Vortex Element Methods for Fluid Dynamic Analysis of Engineering Systems*. Cambridge University Press, 1991. (J. H. B. SMITH) **239**, 1992, 720.

LINDZEN, R. S., LORENZ, E. N. & PLATZMAN, G. W. (Eds) *The Atmosphere – A Challenge*. American Meteorological Society, 1990 (J. W. MILES) **236**, 1992, 690.

LOMAS, C. G. *Fundamentals of Hot Wire Anemometry*. Cambridge University Press, 1986. (A. M. SAVILL) **237**, 1992, 692.

LUMLEY, J. L. (Ed.) *Whither Turbulence? Turbulence at the Crossroads*. Springer, 1990. (S. C. TRAUGOTT) **237**, 1992, 691.

MCCOMB, W. D. *The Physics of Fluid Turbulence*. Clarendon Press, 1990. (J. C. R. HUNT) **237**, 1992, 688.

MONIN, A. S. *Theoretical Geophysical Fluid Dynamics*. (Translated from the Russian by R. HARDIN.) Kluwer Academic Publishers, 1990. (S. D. MOBBS) **226**, 1991, 657.

MUNSON, B. R., YOUNG, D. F. & OKIISHI, T. H. *Fundamentals of Fluid Mechanics*. Wiley, 1990. (O. M. PHILLIPS) **227**, 1991, 689.

NUNN, R. H. *Intermediate Fluid Mechanics*. Hemisphere, 1989. (O. M. PHILLIPS) **227**, 1991, 689.

O'CONNOR, M. *Writing Successfully in Science*. Harper Collins, 1991. (L. DRATH) **236**, 1992, 692.

O'NEILL, M. E. & CHORLTON, F. *Viscous and Compressible Fluid Dynamics*. Ellis Horwood, 1989. (N. RILEY) **224**, 1991, 661.

OTTINO, J. M. *The Kinematics of Mixing: Stretching, Chaos and Transport*. Cambridge University Press, 1989. (G. I. BARENBLATT) **234**, 1992, 691.

PANCHEV, S. *Dynamic Meteorology*. Kluwer Academic Publishers, 1985. (D. J. ANDERSON) **229**, 1991, 691.

PARK, C. *Nonequilibrium Hypersonic Aerothermodynamics*. Wiley, 1990. (R. A. EAST) **233**, 1991, 692.

PHILLIPS, O. M. *Flow and Reactions in Permeable Rocks*. Cambridge University Press, 1991. (H. E. HUPPERT) **240**, 1992, 687.

PIRONNEAU, O. *Méthodes des Éléments Finis pour les Fluides*. Masson, 1988. (M. A. KELMANSON) **231**, 1991, 689.

POWELL, K. G. *Vortical Solutions of the Conical Euler Equations*. Vieweg, 1990. (J. H. B. SMITH) **232**, 1991, 691.

PROBSTEIN, R. F. *Physicochemical Hydrodynamics. An Introduction*. Butterworths, 1989. (F. H. BARK) **228**, 1991, 692.

RABINOVICH, M. I. & TRUBETSKOV, D. I. *Oscillations and Waves in Linear and Nonlinear Systems*. Kluwer Academic Publishers, 1989. (J. W. MILES) **222**, 1991, 694.

RICHARDSON, S. M. *Fluid Mechanics*. Hemisphere, 1989. (N. RILEY) **225**, 1991, 693.

ROY, D. N. *Applied Fluid Mechanics*. Ellis Horwood, 1988. (O. M. PHILLIPS) **227**, 1991, 689.

RUELLE, D. *Chaotic Evolution and Strange Attractors*. Cambridge University Press, 1989. (D. G. DRITSCHEL) **226**, 1991, 655.

RUSSEL, W. B., SAVILLE, D. A. & SCHOWALTER, W. R. *Colloidal Dispersions*. Cambridge University Press, 1989. (J. L. ANDERSON) **222**, 1991, 692.

RUTTEN, R. J. & SEVERINO, G. (Eds) *Solar and Stellar Granulation*. Kluwer Academic Publishers, 1989. (N. O. WEISS) **228**, 1991, 228.

RYAN, M. P. (Ed.) *Magma Transport and Storage*. Wiley, 1990. (J. R. LISTER) **238**, 1992, 723.

SERRIN, J. (Ed.) *New Perspectives in Thermodynamics*. Springer, 1986. (J. P. DOUGHERTY) **221**, 1990, 693.

SRITHARAN, S. S. *Invariant Manifold Theory for Hydrodynamic Transition*. Longman, 1990. (J. F. TOLAND) **230**, 1991, 694.

STULL, R. B. *An Introduction to Boundary Layer Meterology*. Kluwer Academic Publishers, 1988. (R. BRITTER) **224**, 1991, 660.

TAKAHASHI, T. *Debris Flow*. Balkema, 1991. (K. HUTTER) **240**, 1992, 692.

TING, L. & KLEIN, R. *Viscous Vortical Flows*. Springer, 1991. (D. W. MOORE) **235**, 1992, 692.

TOWNSON, J. M. *Free-Surface Hydraulics*. Unwin Hyman, 1991. (R. H. J. SELLIN) **239**, 1992, 721.

TUFTE, E. R. *Envisioning Information*. Graphics Press, 1990. (J. O. KESSLER) **233**, 1991, 690.

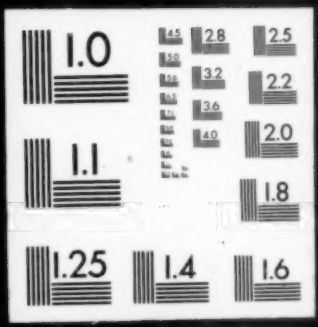
VEN, T. G. M. VAN DE *Colloidal Hydrodynamics*. Academic Press, 1989. (J. L. ANDERSON) **222**, 1991, 692.

VENKATRAM, A. & WYNGAARD, J. C. (Eds) *Lectures on Air Pollution Modeling*. American Meteorological Society, 1988. (F. T. M. NIEUWSTADT) **229**, 1991, 690.

WILLIAMS, J. & ELDER, S. A. *Fluid Physics for Oceanographers and Physicists*. Pergamon, 1989. (O. M. PHILLIPS) **227**, 1991, 689.

WORLD METEOROLOGICAL ORGANIZATION. *Guide to Wave Analysis and Forecasting*. WMO, 1988. (G. KOMEN) **234**, 1992, 692.

YOUNG, A. D. *Boundary Layers*. BSP Professional Books, 1989. (L. C. SQUIRE) **226**, 1991, 656.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